Abstract of the Disclosure

An apparatus and method for conversion of direct stream digital (DSD) signal samples to pulse code modulated (PCM) signal samples using a look-up table. The apparatus includes a first-in-first-out (FIFO) buffer that contains a plurality of bits from a DSD signal, the plurality of bits further divided into a plurality of words of the same size. The apparatus comprises a look-up table coupled to the FIFO buffer, the look-up table generating a result for each of the plurality of words. In one embodiment, the apparatus includes an accumulator coupled to the look-up table, the accumulator holding the results added together. After adding the result for the last word in the plurality of bits, the accumulator generates at an output a multiple bit PCM signal sample. The apparatus includes an address generator connected to the FIFO buffer and look-up table.